

OPERATING SUMMARY

THE REGIONAL MUNICIPALITY OF HALDIMAND-NORFOLK

HAGERSVILLE WATER POLLUTION CONTROL PLANT

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**HAGERSVILLE
WATER POLLUTION CONTROL PLANT**

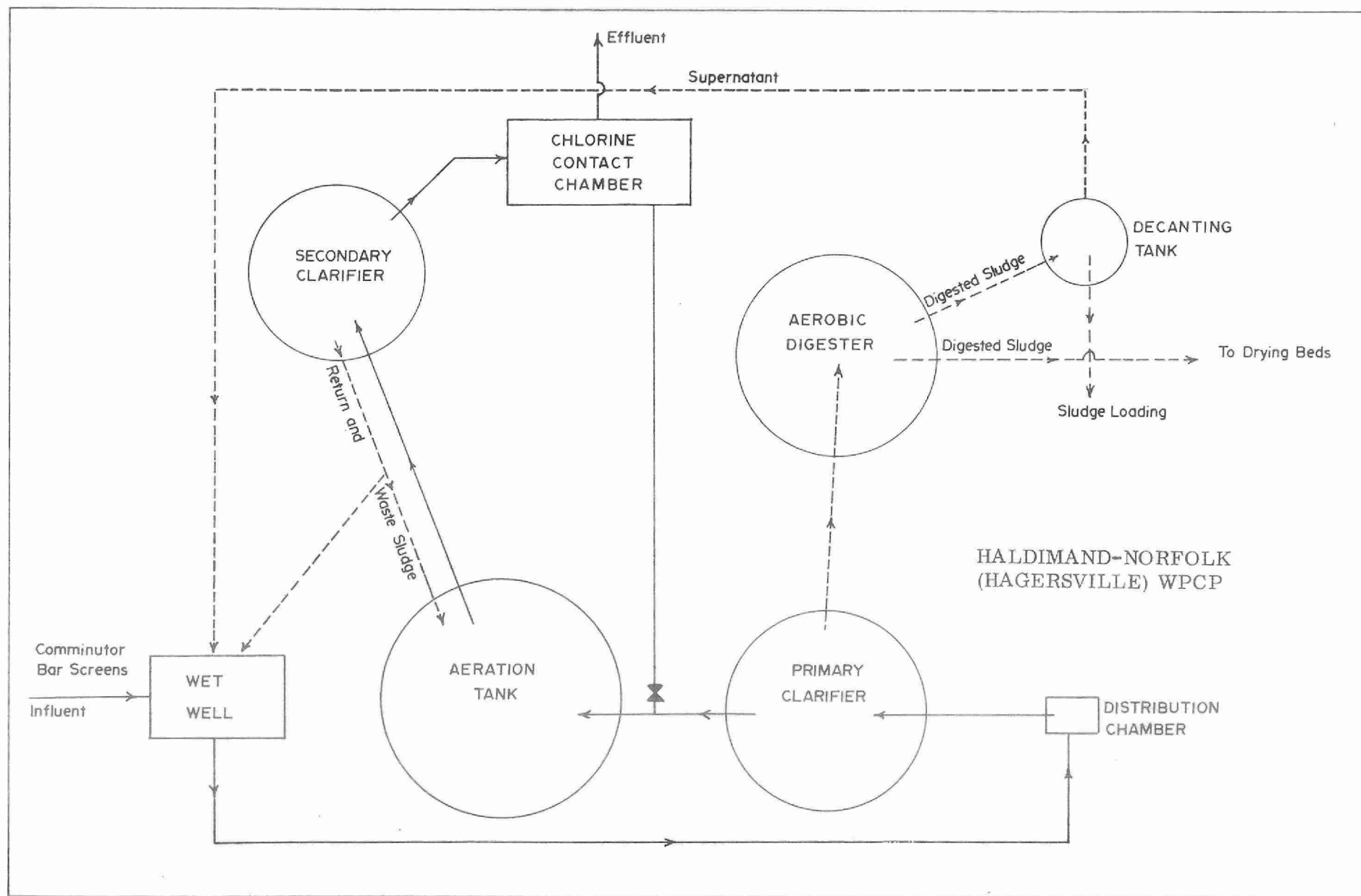
operated for
the Regional Municipality of
HALDIMAND-NORFOLK
by the
MINISTRY OF THE ENVIRONMENT

1974 ANNUAL OPERATING SUMMARY

prepared by
Plant Performance Unit
TECHNICAL SERVICES BRANCH
T. Cross, Director

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DESIGN DATA

Project: Haldimand-Norfolk
(Hagersville) WPCP

Project No: 1-1001-72

Design Capacity: 0.25 MIGD

PRIMARY CLARIFIER:

25' dia. x 10' swd

Volume: 30644 I. gal. Detention: 2.9 hours

Surface overflow rate: 510 gal/ft² / day

AERATION TANK:

36' dia. x 8' swd

Volume: 50831 I. gal. Detention: 4.8 hours

SECONDARY CLARIFIER:

24' dia. x 9' swd

Volume: 25415 I. gal Detention: 2.4 hours

Surface overflow rate: 551 gal/ft²/day

CHLORINE CONTACT CHAMBER:

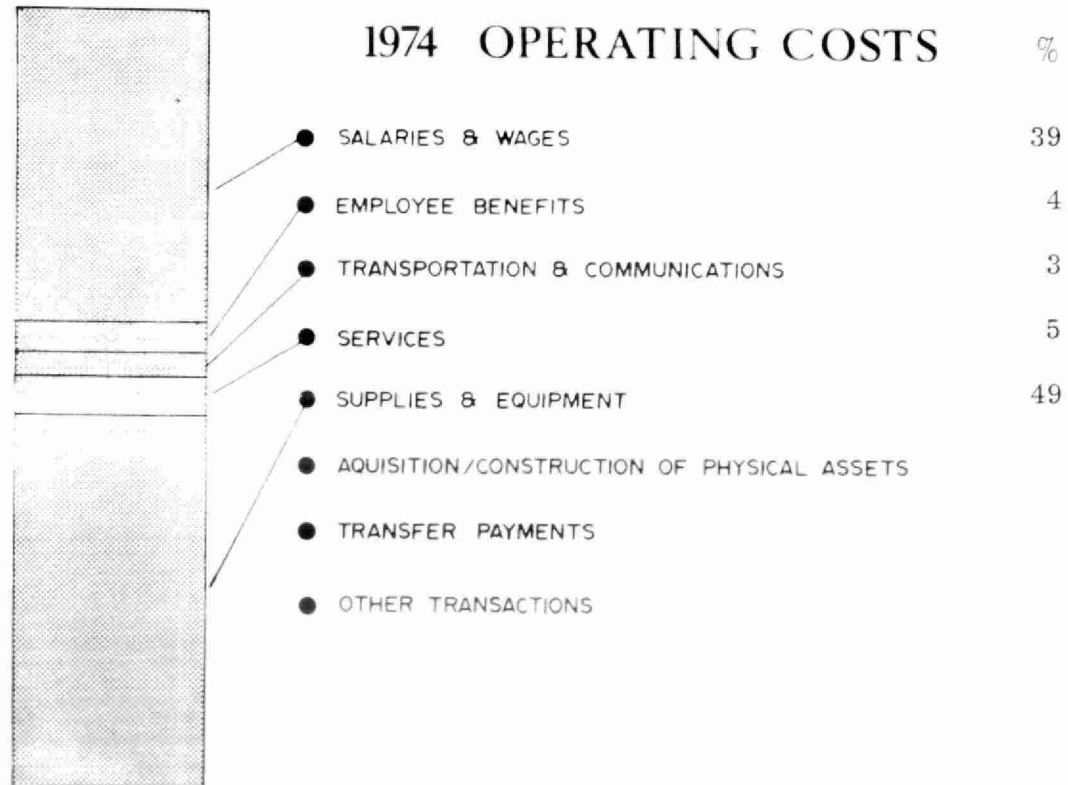
6.5' x 15.5' x 7'

Volume: 4400 I. gal. Detention: 25 min.

SLUDGE DRYING BEDS:

Area: 7600 ft²

ANNUAL COSTS



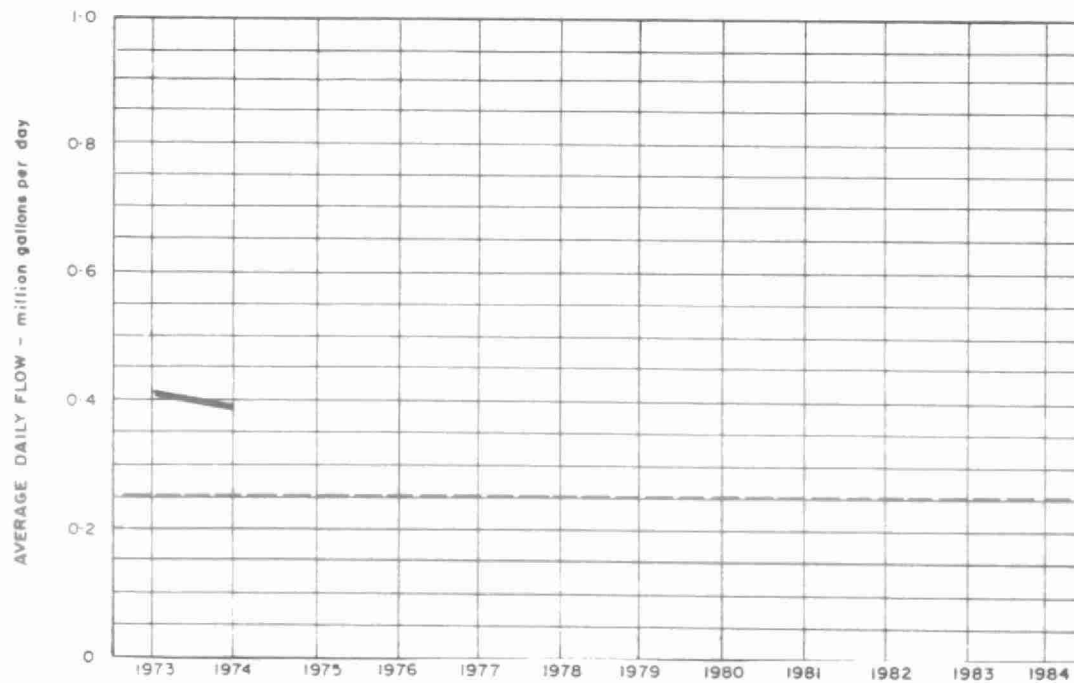
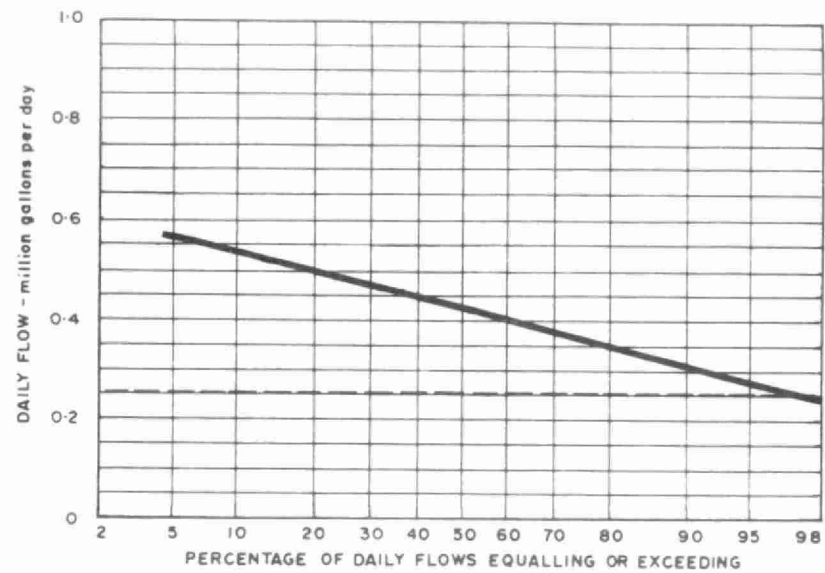
YEARLY OPERATING COSTS

YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M.G.	¢/lb BOD
1973	151	14,610	97	13
1974	143	39,998	279	65

OPERATING EXPENDITURES

Regular Staff	\$ 11,221	\$
Casual (Unclassified) Staff	<u>4,264</u>	
TOTAL SALARIES AND WAGES		<u>15,485</u>
TOTAL EMPLOYEE BENEFITS		<u>1,418</u>
TOTAL TRANSPORTATION AND COMMUNICATIONS		<u>1,226</u>
Insurance	<u>427</u>	
Sludge Haulage	<u>-</u>	
Repairs and Maintenance	<u>775</u>	
Other Services	<u>745</u>	
TOTAL SERVICES		<u>1,947</u>
Machinery and Equipment	<u>11,024</u>	
Chemicals	<u>1,539</u>	
Utilities	<u>2,748</u>	
Other Supplies and Equipment	<u>4,611</u>	
TOTAL SUPPLIES AND EQUIPMENT		<u>19,922</u>
TOTAL AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS		<u> </u>
TOTAL TRANSFER PAYMENTS		<u> </u>
OTHER TRANSACTIONS		<u> </u>
GRAND TOTAL	GRAND TOTAL	\$ <u>39,998</u>

PROCESS DATA FLOWS

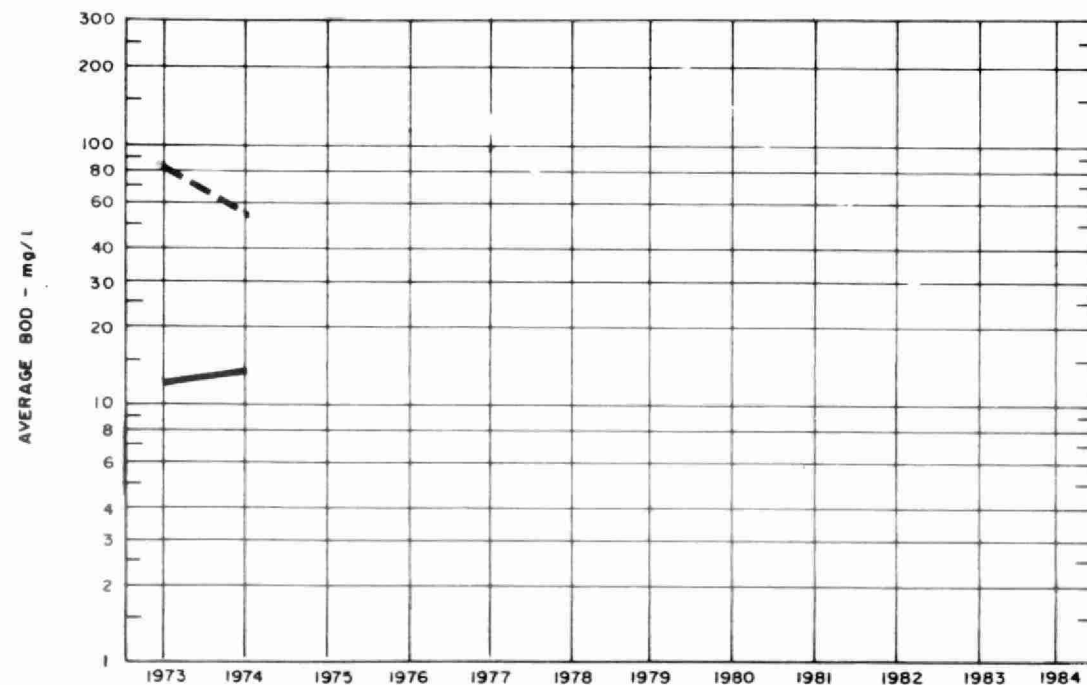
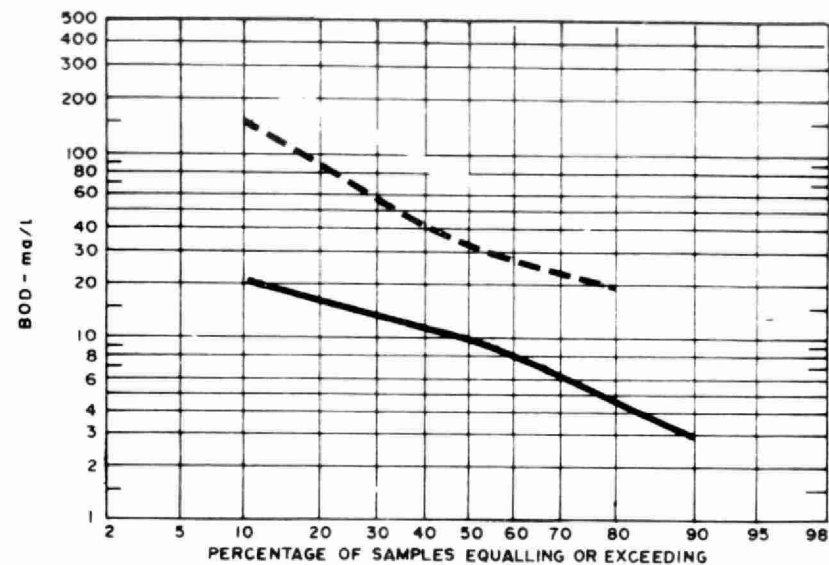


DESIGN CAPACITY - - - - -

PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW million gallons	AVERAGE DAY mil. gal	MAXIMUM DAY mgd	INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l P	EFFLUENT mg/l P
						%	10 ³ pounds			%	10 ³ pounds		
JAN	14.50	.47	.59	42	17	60	3.6	60	20	67	5.8	1.8	.4
FEB	11.85	.42	.50										
MAR	13.22	.43	.49	40	20	50	2.6	60	30	50	4.0	2.2	1.8
APR	11.85	.42	.50	28	10	64	2.4	150	20	87	17.3	4.8	.5
MAY	13.09	.42	.54	180	22	88	20.7	160	<15	91	20.0	6.8	.3
JUNE	14.19	.47	1.02									6.2	.6
JULY	9.59	.31	.90									3.0	1.7
AUG	9.71	.31	.41									3.0	1.7
SEPT	10.73	.36	.70	38	3	92	3.8	50	15	70	3.8	9.4	1.9
OCT	10.14	.33	.40	9	9	0	0	75	25	67	5.1	1.3	.4
NOV	11.63	.39	.47										.8
DEC	12.77	.41	.50	80	8	90		130	70	46		3.2	.8
TOTAL	143.27	-	-	-	-	-		-	-	-		-	-
AVG.		.39	MAXIMUM 1.02	57	14	75	5.1	93	28	70	7.8	3.8	1.2
No. of Samples	-	-	-	8	8	-	-	8	7	-	-	17	21

BIOCHEMICAL OXYGEN DEMAND

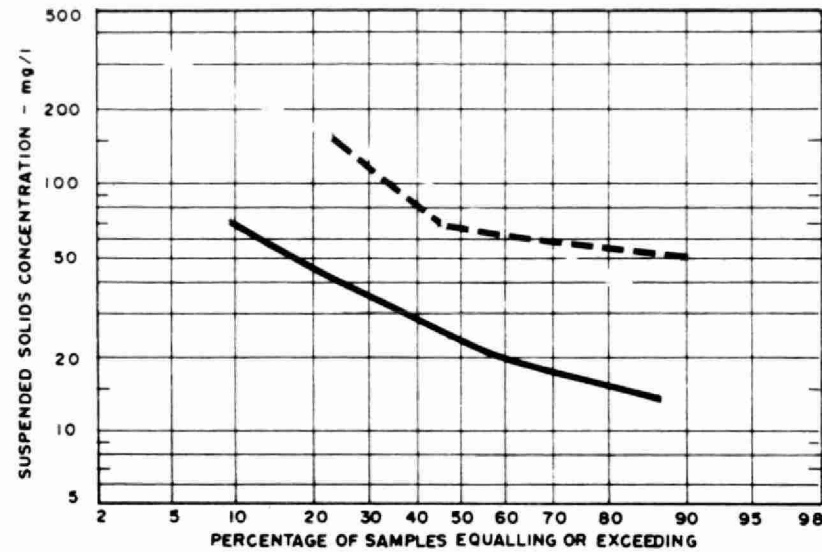


PLANT INFLUENT - - - - -

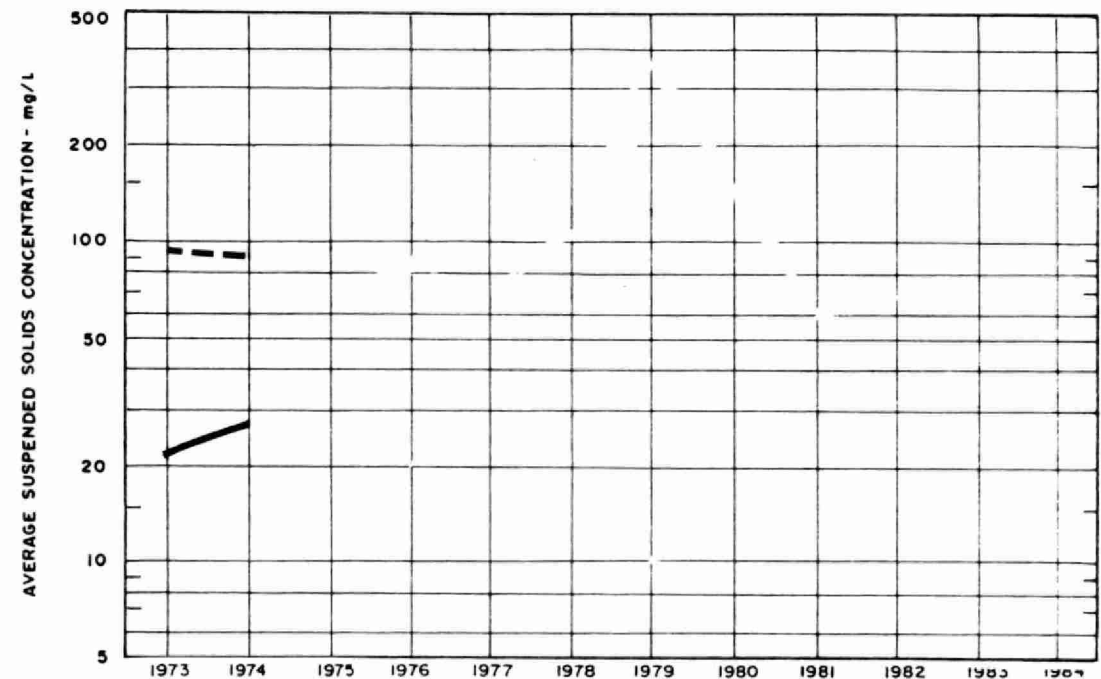
PRIMARY EFFLUENT

PLANT EFFLUENT —————

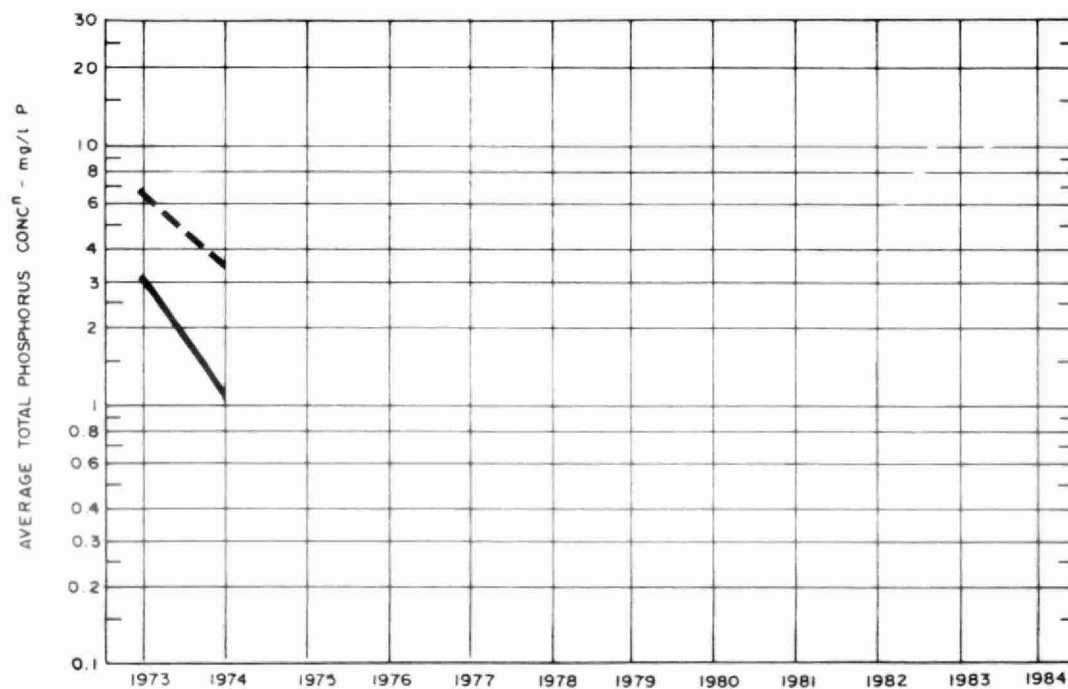
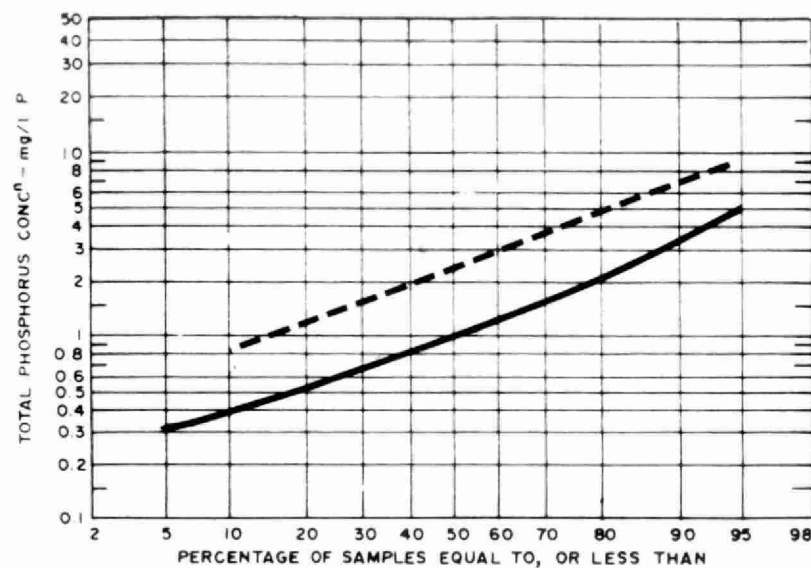
SUSPENDED SOLIDS



PLANT INFLUENT - - - - -
 PRIMARY EFFLUENT
 PLANT EFFLUENT ———



PHOSPHORUS



PLANT INFLUENT - - - - -
 PLANT EFFLUENT —————

TREATMENT DATA

MONTH	GRIT	CHLORINATION		AERATION			WASTE SLUDGE			AEROBIC DIGESTER			
	QUANTITY REMOVED	Cl ₂ USED	AVG. DOSAGE	MLSS CONC	F/M	AIR USED	QUANTITY	SUSPENDED SOLIDS	VOL. SOLIDS	QUANTITY	SUSPENDED SOLIDS	VOL SOLIDS	AMOUNT HAULED
	cubic feet	pounds	mg/l	mg/l	day ⁻¹	$\frac{1000 \text{ ft}}{\text{lb BOD}}$	10 gallons	mg/l	%	10 gallons	mg/l	%	cubic yards
JAN		354	2.4	2300	.12								
FEB		347	3.1										
MAR		659	5.0		.05								
APR		408	3.1	4400	.01								
MAY		379	3.0	3300	.11								
JUNE		310	2.2										
JULY		354	3.7										
AUG		283	3.6										
SEPT		327	3.0										
OCT.		323	3.2										
NOV		304	2.6										
DEC		360	2.8										
TOTAL		4408	-	-	-	-		-	-		-	-	
AVG.	cu. ft/mil gal		3.1	3300	.07								

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